

Please provide the following information, and submit to the NOAA DM Plan Repository.

Reference to Master DM Plan (if applicable)

As stated in Section IV, Requirement 1.3, DM Plans may be hierarchical. If this DM Plan inherits provisions from a higher-level DM Plan already submitted to the Repository, then this more-specific Plan only needs to provide information that differs from what was provided in the Master DM Plan.

URL of higher-level DM Plan (if any) as submitted to DM Plan Repository:

1. General Description of Data to be Managed**1.1. Name of the Data, data collection Project, or data-producing Program:**

Delaware / New Jersey / Pennsylvania 2014 ESI INVERTEBRATES Polygons

1.2. Summary description of the data:

This data set contains sensitive biological resource data for terrestrial, marine, and estuarine invertebrate species in Delaware Bay and nearby areas of Delaware, New Jersey, and Pennsylvania. Vector polygons in this data set represent invertebrate distribution and concentration areas. Species specific abundance, seasonality, status, life history, and source information are stored in relational data tables (described below) designed to be used in conjunction with this spatial data layer. This data set comprises a portion of the ESI data for Delaware/New Jersey/Pennsylvania. ESI data characterize the marine and coastal environments and wildlife by their sensitivity to spilled oil. The ESI data include information for three main components: shoreline habitats, sensitive biological resources, and human-use resources.

1.3. Is this a one-time data collection, or an ongoing series of measurements?

One-time data collection

1.4. Actual or planned temporal coverage of the data:

2013 to 2014

1.5. Actual or planned geographic coverage of the data:

W: -75.75, E: -74.0377, N: 40.2501, S: 38.375

This reflects the extent of all land and water features included in the overall Delaware Bay (Delaware, New Jersey, Pennsylvania) 2014 ESI study region. The bounding box for this particular feature class may vary depending on occurrences identified and mapped.

1.6. Type(s) of data:

(e.g., digital numeric data, imagery, photographs, video, audio, database, tabular data, etc.)
Map (digital)

1.7. Data collection method(s):

(e.g., satellite, airplane, unmanned aerial system, radar, weather station, moored buoy, research vessel, autonomous underwater vehicle, animal tagging, manual surveys,

enforcement activities, numerical model, etc.)

1.8. If data are from a NOAA Observing System of Record, indicate name of system:

1.8.1. If data are from another observing system, please specify:

2. Point of Contact for this Data Management Plan (author or maintainer)

2.1. Name:

ESI Program Manager

2.2. Title:

Metadata Contact

2.3. Affiliation or facility:

2.4. E-mail address:

orr.esi@noaa.gov

2.5. Phone number:

3. Responsible Party for Data Management

Program Managers, or their designee, shall be responsible for assuring the proper management of the data produced by their Program. Please indicate the responsible party below.

3.1. Name:

ESI Program Manager

3.2. Title:

Data Steward

4. Resources

Programs must identify resources within their own budget for managing the data they produce.

4.1. Have resources for management of these data been identified?

4.2. Approximate percentage of the budget for these data devoted to data management (specify percentage or "unknown"):

5. Data Lineage and Quality

NOAA has issued Information Quality Guidelines for ensuring and maximizing the quality, objectivity, utility, and integrity of information which it disseminates.

5.1. Processing workflow of the data from collection or acquisition to making it publicly accessible

(describe or provide URL of description):

Lineage Statement:

For each species, the mapping extent was dependent upon information availability and location of mapped coastal habitats and shorelines. Invertebrates depicted in this atlas include select terrestrial, marine, and estuarine species of commercial, ecological, and/or conservation interest.

Process Steps:

- 2014-03-01 00:00:00 - Horseshoe crab, blue crab, eastern oyster, knobbed and channeled whelk, Atlantic surfclam, and northern quahog support highly valuable commercial shellfisheries in the Delaware Bay region. Horseshoe crab spawning beaches were mapped using data from the 2013 report "Horseshoe crab spawning in Delaware Bay: 1999-2012" to the Atlantic States Marine Fisheries Commission's Horseshoe Crab Technical Committee. In Indian River Bay and Rehoboth Bay, spawning beaches were mapped using data from the Center for Inland Bays. Horseshoe crab distributions within Delaware Bay were mapped based upon catches in fishery independent trawl sampling data from Delaware Department of Natural Resources and Environmental Control (DNREC) and New Jersey Department of Environmental Protection Bureau of Shellfisheries (NJDEP BS). Distributions in the Atlantic Ocean were based mainly on published literature and expert knowledge. Data on eastern oyster distributions was provided by DNREC and NJDEP BS/Rutgers University. DNREC provided polygonal and point spatial data on oyster reef locations on the western side of Delaware Bay and its tributaries and NJDEP BS and Rutgers provided polygonal data for the larger oyster reef complexes on the New Jersey side of Delaware Bay. The timing of life history stages and seasonalities for all eastern oyster records were based on Estuarine Living Marine Resources (ELMR) data and expert review. Rare and endangered species of insects and other invertebrates from Delaware were mapped in part by using element occurrence data provided by DNREC. Species names were obscured to protect sensitive resources. Polygons in element occurrence records with a diameter greater than 100 meters (m) were mapped as is, and all other polygons were mapped after applying a polygonal buffer and a randomized geographic shift. Blue crab distributions were mapped in Delaware Bay based on expert knowledge from DNREC staff, and data from the fishery independent sampling surveys conducted by DNREC and NJDEP BS. Seasonality and life history stages were drafted from published literature and refined during reviews with DNREC staff. In the Inland Bays of Delaware and New Jersey, blue crab distributions, concentrations, and seasonalities were based upon mid-Atlantic ELMR data. Freshwater mussels were mapped in the Delaware River and small water bodies in Delaware and New Jersey based on data provided by DNREC, NJDEP Endangered and Nongame Species Program (ENSP), and Partnership for the Delaware Estuary (PDE). In the case of DNREC and PDE data, species names were masked to protect rare mussels. DNREC element occurrence polygons were buffered and randomly shifted when they were

less than 100 m in diameter. Northern quahog was mapped in New Jersey based upon NJDEP BS hard copy documents. Additional records for northern quahog were mapped in New Jersey and Delaware from the mid-Atlantic ELMR report, in which data on occurrence and abundance of a species is generalized to much larger areas. Data on Atlantic surfclam distributions in NJ coastal waters was provided by NJDEP BS as a report on stock inventories. Report data was used to create three geographic regions with separate concentrations along the NJ coast. Mid-Atlantic ELMR data was used to fill in information about species or regions that are not directly sampled by DNREC or NJDEP BS staff. Presence/absence, concentrations, and life history stages were all incorporated as is for select geographies. These geographies include Barnegat Bay, inland bays of NJ, Delaware Bay, and the inland bays of DE. Species mapped from mid-Atlantic ELMR data include American lobster, blue crab, blue mussel, northern quahog, and softshell clam.

- 2014-03-01 00:00:00 - The above digital and/or hardcopy sources were compiled by the project biologist to create the INVERTEBRATES data layer. Depending on the type of source data, three general approaches are used for compiling the data layer: 1) information gathered during initial interviews and from hardcopy sources are compiled onto U.S. Geological Survey 1:45,000 topographic quadrangles and digitized; 2) hardcopy maps are digitized at their source scale; 3) digital data layers are evaluated and used "as is" or integrated with the hardcopy data sources. See the Lineage section for additional information on the type of source data for this data layer. The ESI, biology, and human-use data are compiled into the standard ESI digital data format. A second set of interviews with participating resource experts are conducted to review the compiled data. If necessary, edits to the INVERTEBRATES data layer are made based on the recommendations of the resource experts, and final hardcopy maps and digital data are created.

5.1.1. If data at different stages of the workflow, or products derived from these data, are subject to a separate data management plan, provide reference to other plan:

5.2. Quality control procedures employed (describe or provide URL of description):

6. Data Documentation

The EDMC Data Documentation Procedural Directive requires that NOAA data be well documented, specifies the use of ISO 19115 and related standards for documentation of new data, and provides links to resources and tools for metadata creation and validation.

6.1. Does metadata comply with EDMC Data Documentation directive?

No

6.1.1. If metadata are non-existent or non-compliant, please explain:

Missing/invalid information:

- 1.7. Data collection method(s)

- 4.1. Have resources for management of these data been identified?
- 4.2. Approximate percentage of the budget for these data devoted to data management
- 5.2. Quality control procedures employed
- 7.1. Do these data comply with the Data Access directive?
 - 7.1.1. If data are not available or has limitations, has a Waiver been filed?
 - 7.1.2. If there are limitations to data access, describe how data are protected
- 7.4. Approximate delay between data collection and dissemination
- 8.1. Actual or planned long-term data archive location
- 8.3. Approximate delay between data collection and submission to an archive facility
- 8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?

6.2. Name of organization or facility providing metadata hosting:

NMFS Office of Science and Technology

6.2.1. If service is needed for metadata hosting, please indicate:

6.3. URL of metadata folder or data catalog, if known:

<https://www.fisheries.noaa.gov/inport/item/55235>

6.4. Process for producing and maintaining metadata

(describe or provide URL of description):

Metadata produced and maintained in accordance with the NOAA Data Documentation Procedural Directive: https://nosc.noaa.gov/EDMC/DAARWG/docs/EDMC_PD-Data_Documentation_v1.pdf

7. Data Access

NAO 212-15 states that access to environmental data may only be restricted when distribution is explicitly limited by law, regulation, policy (such as those applicable to personally identifiable information or protected critical infrastructure information or proprietary trade information) or by security requirements. The EDMC Data Access Procedural Directive contains specific guidance, recommends the use of open-standard, interoperable, non-proprietary web services, provides information about resources and tools to enable data access, and includes a Waiver to be submitted to justify any approach other than full, unrestricted public access.

7.1. Do these data comply with the Data Access directive?

7.1.1. If the data are not to be made available to the public at all, or with limitations, has a Waiver (Appendix A of Data Access directive) been filed?

7.1.2. If there are limitations to public data access, describe how data are protected from unauthorized access or disclosure:

7.2. Name of organization of facility providing data access:

Office of Response and Restoration (ORR)

7.2.1. If data hosting service is needed, please indicate:**7.2.2. URL of data access service, if known:**

https://response.restoration.noaa.gov/esi_download

7.3. Data access methods or services offered:

Data can be accessed by downloading the zipped ArcGIS geodatabase from the Download URL (see Distribution Information). Questions can be directed to the ESI Program Manager (Point Of Contact).

7.4. Approximate delay between data collection and dissemination:**7.4.1. If delay is longer than latency of automated processing, indicate under what authority data access is delayed:****8. Data Preservation and Protection**

The NOAA Procedure for Scientific Records Appraisal and Archive Approval describes how to identify, appraise and decide what scientific records are to be preserved in a NOAA archive.

8.1. Actual or planned long-term data archive location:

(Specify NCEI-MD, NCEI-CO, NCEI-NC, NCEI-MS, World Data Center (WDC) facility, Other, To Be Determined, Unable to Archive, or No Archiving Intended)

8.1.1. If World Data Center or Other, specify:**8.1.2. If To Be Determined, Unable to Archive or No Archiving Intended, explain:****8.2. Data storage facility prior to being sent to an archive facility (if any):**

Office of Response and Restoration - Seattle, WA

8.3. Approximate delay between data collection and submission to an archive facility:**8.4. How will the data be protected from accidental or malicious modification or deletion prior to receipt by the archive?**

Discuss data back-up, disaster recovery/contingency planning, and off-site data storage relevant to the data collection

9. Additional Line Office or Staff Office Questions

Line and Staff Offices may extend this template by inserting additional questions in this section.